

Ministry of the Environment programs and initiatives

Why beaches are posted

It can be a disappointment. You arrive at a beach on a hot summer day looking forward to a cool swim. Then you find signs posted that warn bathers to stay out of the water.

After heavy rains, beaches often are posted for up to 48 hours with signs warning against bathing because of water pollution

What are the risks of going into the water?

The beach may be posted because the water has levels of bacteria that increase your risk of developing an infection. The most common are minor infections of the skin, eye, nose and throat and stomach disorders.

Less often, beaches are posted because of floating debris, oil, scum, excessive weed (algae) growth, bad odors and cloudy or murky water.

What's polluting our beaches

Several sources of water pollution can result in beach postings. These include:

- runoff from stormwater (heavy rain)
- overflows from combined sewers that carry both sewage and stormwater
- excess flows that have bypassed municipal or industrial sewage treatment plants.

Large populations of waterfowl that colonize a beach or surrounding area also contribute to water pollution.

In urban areas, stormwater runoff contains bacteria from pet and wildlife feces, illegally connected sanitary sewers and poorly installed basement washrooms.

Beaches in rural areas are usually closed because of bacterial contamination from two sources. One source is domestic septic systems that are poorly maintained and located. The other source can be agricultural activities, particularly livestock operations, if not properly managed.

Bacteria can enter streams through runoff

from manure piles and feedlots, by livestock being allowed access to streams and when milkhouse washwater is dumped into drainage ditches and streams.

Guidelines for beach postings

Ontario beaches are posted with warnings when *Escherichia coli* (E.coli or EC) bacteria — present in the feces of almost all warm-blooded animals — measure more than 100 EC per 100 millilitres of water. However, based on health risk data, the chances are less than 1.5 per cent that you will contract a disease such as gastrointestinal illness when swimming in waters that contain as much as 200 EC per 100 mL of water.

Generally it's up to the local Medical Officer of Health to judge when a beach should be posted. Beaches are usually reopened when E.coli levels have fallen to an acceptable level of 100 EC per 100 mL for two or three days.

Watch out for rainstorms

Beach postings often occur after heavy rains. In urban areas, stormwater washes fecal material from dogs, cats, birds and other wildlife into storm sewers that flow directly into nearby rivers and lakes. In rural areas, stormwater washes fecal matter from livestock operations into nearby streams and lakes.

Many older cities have combined sewers that convey both sanitary sewage and stormwater to a sewage treatment plant. During heavy rains, however, overflows from these combined sewers are discharged untreated directly into rivers and lakes.

In cities like Toronto, some beaches have permanent signs that warn against swimming within 48 hours after a heavy rain-

storm. In the city of Ottawa some beaches are posted for 24 hours after a rainfall of more than 10 millimetres.

How you can help

- Pet wastes are a major source of bacteria in stormwater. Please observe stoop and scoop bylaws. Remove dog feces immediately from streets, public parks and private property.
- Where possible, detach eavestrough downspouts so that rainwater goes into the ground rather than into a sewer. This reduces the amount of water going directly into sewers.
- Reduce water use in your household. This helps avoid overflow problems at some municipal sewage treatment plants that may cause untreated sewage to enter lakes and rivers.
- Make sure that any washrooms added to your home are properly connected to the sanitary sewer pipes.
- Don't discharge backwash from your pool onto a road. Pool water should be discharged either to the sanitary sewer, or across the lawn to the storm sewer, three days after the last chemical application. By allowing pool water to flow across a lawn, some water will be lost through infiltration and most pool chemicals will evaporate into the air.
- Consider a driveway of crushed or interlocking stone. An open surface driveway such as this reduces the amount of stormwater entering the sewer system. It also replenishes ground-water.
- In agricultural areas, fence livestock away from streams and give them alternative sources of water. This benefits the health of both the herd and the environment.
- Make sure that runoff from feedlots and manure piles is properly contained.

- Upgrade septic systems and keep them in good working order.

Taking action on urban and rural beaches

The Ministry of the Environment is constantly seeking new ways of dealing with water quality problems caused by runoff and overflows. For example:

- The ministry is a partner in SWAMP, the Storm Water Assessment Monitoring and Performance partnership. SWAMP evaluates new technologies that are designed to prevent and control the effects of stormwater and combined sewer overflows. The other partners are Environment Canada, the Toronto Region Conservation Authority, the Ministry of Transportation and several municipalities.
- The way land in the upper parts of a watershed is used and developed can have serious effects on downstream uses, including beaches. Through published documents and technical support, the ministry helps municipalities to develop their vital watershed management plans and to plan and design their stormwater management systems.

For more information on the beaches in your area please call your local public health office.

For information on what the Ministry of the Environment is doing to protect beaches and water quality please call:

Public Information Centre
135 St. Clair Ave. W.
Toronto ON M4V 1P5
Tel: (416) 325-4000
Fax: (416) 325-3159
Toll free number: 1-800-565-4923
Internet address: www.ene.gov.on.ca



